



BACHELOR IN FOOD & AGRICULTURAL PRODUCT TECHNOLOGY

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COURSE HANDBOOK

RESEARCH METHODOLOGY AND EXPERIMENTAL DESIGN

Course designation	Research Methodology and Experimental Design
Course code	TPHP213102
Course level	Bachelor
Semester(s) in which the module is taught	Semester 5 / Odd Semester
Person responsible for the module	Wahyu Dwi Saputra, S.T.P., M.Agr.Sc., Ph.D. Dr. Widiastuti Setyaningsih, S.T.P., M.Sc. Bambang Dwi Wijatniko, S.T.P., M.Agr.Sc., M.Sc., Ph.D. Dr. Lulum Leliana, S.T.P.
Language	Indonesian
Relation to curriculum	Compulsory Courses
Teaching methods	Case-based learning
Workload (incl. contact hours, self-study hours)	1. Lectures 2 credits x 50 minutes x 16 meetings = 1600 minutes = 26.67 hours = 26.67 hours/30 hours = 0.89 ECTS 2. Structured Assignments 2 credits x 60 minutes x 16 meetings = 1920 minutes = 32 hours = 32 hours/30 hours = 1.07 ECTS 3. Self-study 2 credits x 60 minutes x 16 meetings = 1920 minutes = 32 hours = 32 hours/30 hours = 1.07 ECTS Total workload = 3.03 ECTS (90.67 hours)



Credit points	2 credits / 3.03 ECTS			
Required and recommended prerequisites for joining the module	No requirement needed			
Course objectives/intended learning outcomes	Programme Learning Outcome (PLO)			
	PLO KU1	Be able to analyze data and make decisions in order to show independent and group performance to apply knowledge in social life		
	PLO KU3	Be able to communicate scientifically both orally and in writing		
	Course Learning Outcome (CLO)			
	CLO KU1.46	Be able to analyze data statistically		
	CLO KU1.47	Be able to use appropriate data collection and analysis techniques		
	CLO KU1.48	Be able to compile visual presentations of data		
	CLO KU3.54	Be able to create relevant technical documents		
Content	1. Systematics of proposal writing, types of research methods, research ethics 2. Types of experimental designs 3. Data collection and analysis techniques 4. Methods and application of statistical data analysis 5. Tabulation (recap) and presentation of data 6. Research proposal presentation			
Examination forms	Evaluation Base	Evaluation Components	CLO	Percentage
	A. Participatory Activities	Discussion	-	-
	B. Case Study Results	Presentation	CLO KU3.54	25%
		Report	-	-
		Midterm Exam	CLO KU1.46	25%
		Final Exam	-	-
	C. Cognitive	Skill-Based Assessment (SBA)	-	-
		Quiz	-	-
		Midterm Exam	CLO KU1.47	25%
		Final Exam	CLO KU1.48	25%
		Total		100%
Study and examination requirements	The final grade in the module is composed of (50% project results and 50% cognitive). Students must attend 75% of the total meetings to take the exam.			
Reading list	Main:			



	1. Cresswell, J.W. Research Design: Qualitative and Quantitative Approach. SAGE Publications. 2. Montgomery, D.C. 2005. Design and Analysis of Experiments. John Weiey and Son, Int. 3. Snedecor, G.W., and William G Cochran. Statistical Methods. Oxford & IBH Publishing Co.
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